

# State of Utah Baseline Projections 2000-2030

Governor's Office of Planning & Budget January 2000

### **Contact Information**

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### Baseline 2000-2030

- Last official baseline produced in December of 1996
- Baseline 2000-2030 officially released January 2000
- Produced with Utah Process Economic and Demographic Projection Model
- Assumptions developed via a collaborative process involving state and local government

### Changes from the 1997 Baseline

- Projections horizon extended from 2020 to 2030
- New methods for generating assumptions about fertility, survival, labor force participation, and basic employment growth implemented
- Projections available in printed form and on the web
- Low and high scenarios may be produced

### Presentation Overview

- Review of Major Assumptions
- Overview of Method / Process
- Presentation of Summary Results

### Fertility Assumption

- Total fertility rate held constant at 1999 rates by Multi-County District
- 1999 rate for Utah was 2.7
- 1999 rate for the U.S. was 2.1
- 1999 Multi-County District Rates:

Bear River = 2.73

Wasatch Front = 2.68

Mountainland = 3.06

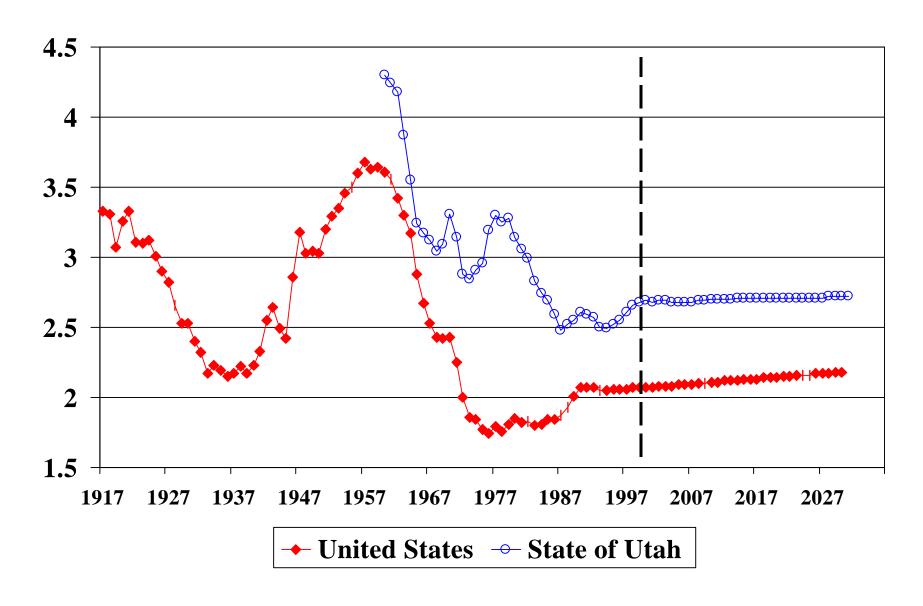
Central = 2.39

Southwest = 2.73

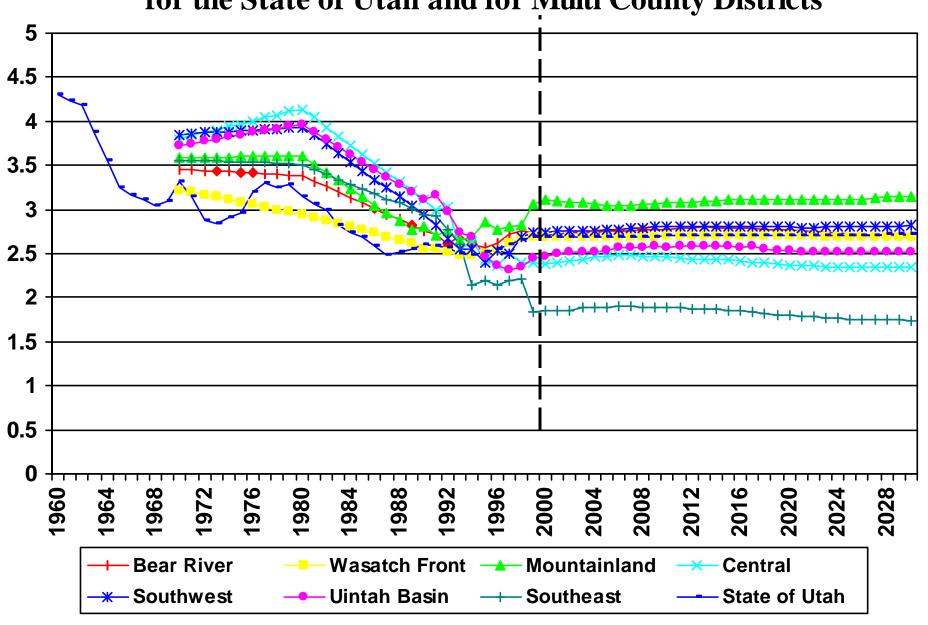
Uintah Basin = 2.45

Southeast = 1.84

## Historical and Projected Total Fertility Rates for Utah and the U.S.



### Historical and Projected Total Fertility Rates for the State of Utah and for Multi County Districts



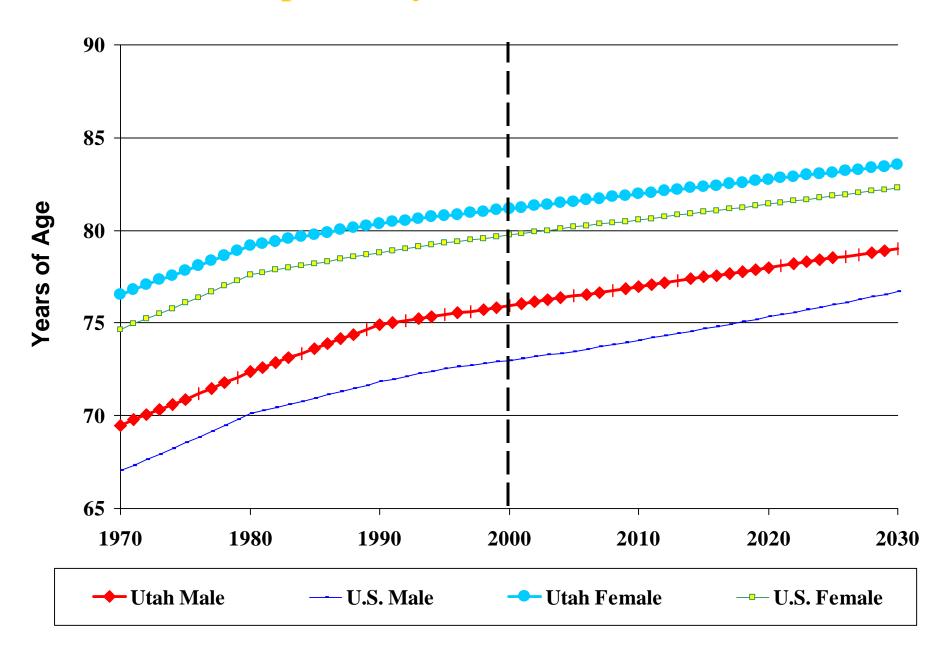
### Survival Assumption

- Reduce mean difference in life expectancy from birth observed in 1970, 1980 and 1990 between Utah and U.S. males and females by approximately half in 2050
- Projected U.S. series is Census middle series, 1995
- Life Expectancy in 2030:

UT Male: 79.01 U.S. Male: 76.68

UT Female: 83.53 U.S. Female: 82.30

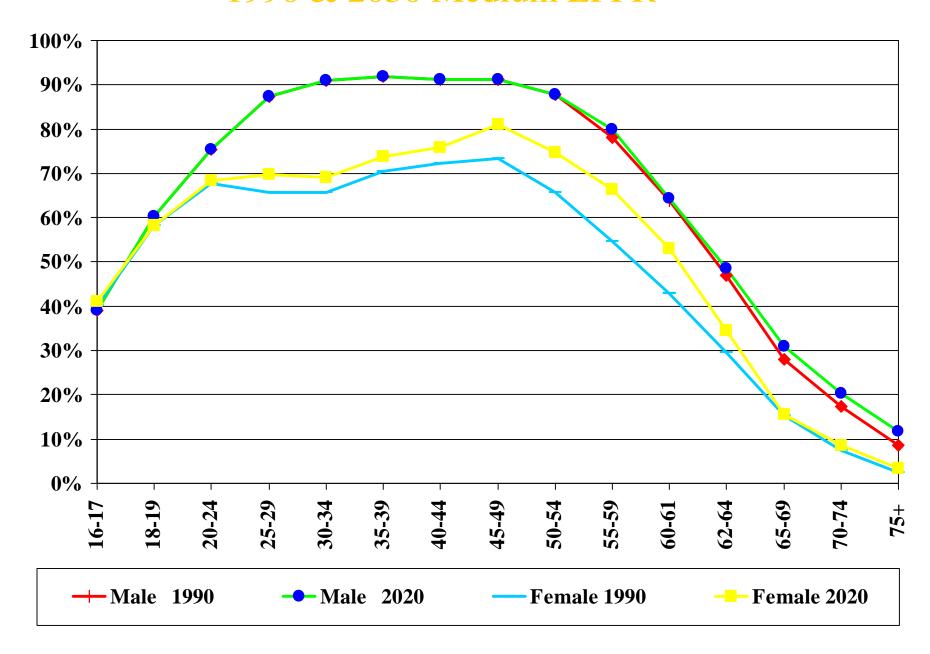
### Life Expectancy at Birth: Utah vs. U.S.



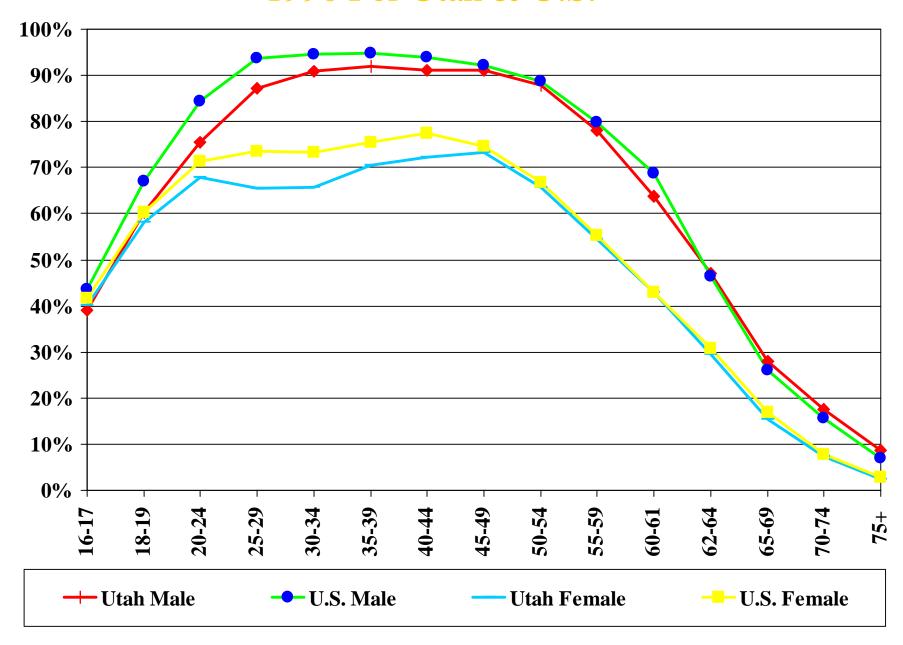
## Labor Force Participation Rate Assumption

- Generally, labor force participation rates by age, sex and MCD 1990 to 2020 are assumed to:
  - a. change at the same rate as projected U.S. rates if positive, or
  - b. remain constant at the 1990 level if negative
- Rates, 2020 to 2050, assumed to be constant

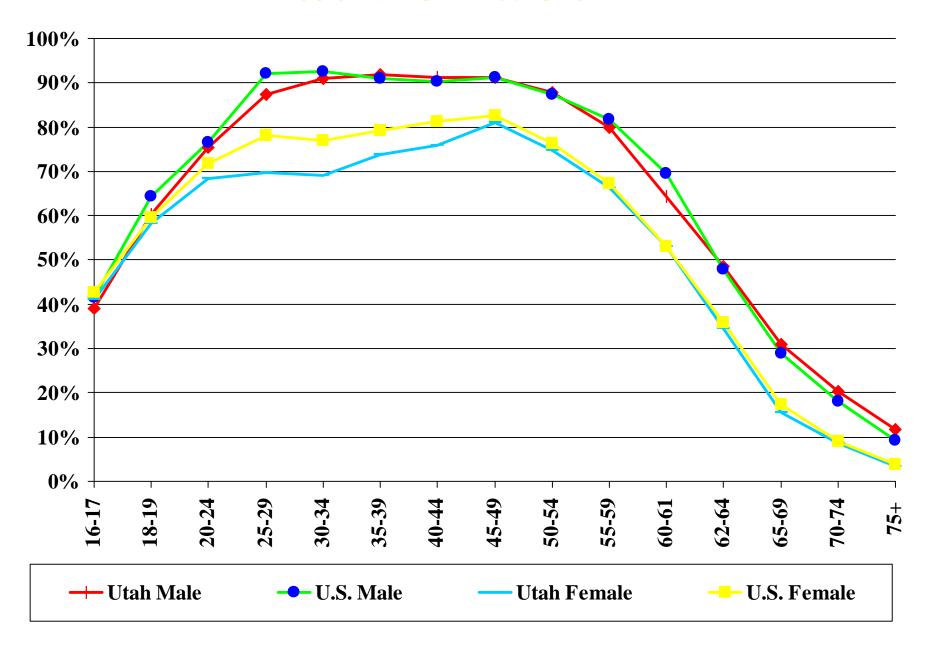
### Utah Labor Force Participation Rates by Age Group: 1990 & 2030 Medium LFPR



## Labor Force Participation Rates by Age Group: 1990 For Utah & U.S.



## Labor Force Participation Rates by Age Group: 2030 for Utah & U.S.

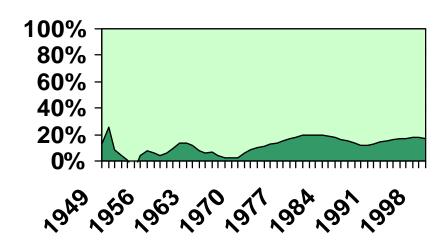


### **Economic Growth Projections**

- Long-Run Assumptions
- Short-Run Forecasts
- Specific Industry Assumptions
- Individual Firm and Organization Assumptions
- Events (Olympics)

### Long-Run Assumptions

### Components of Change



**Shares of Population Change** 

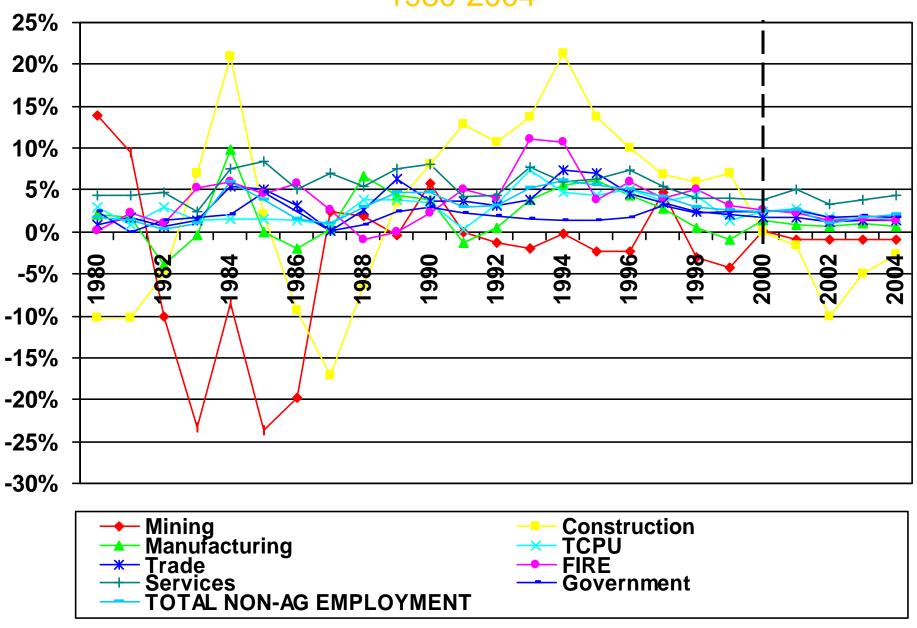
■ Net In-Migration □ Natural Increase

- Net in-migration contributed 17.4% of population increase from 1948 - 1999
- Long term employment growth sufficient to generate the same relative component contributions for 2000 2050

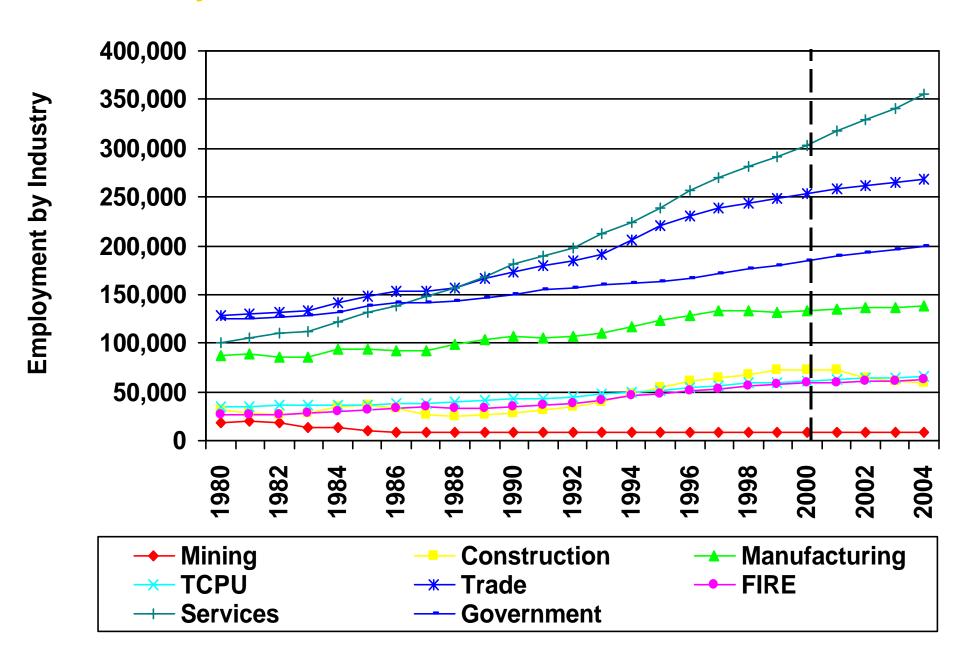
### **Short-Run Forecasts**

- Controlled to state level major industry employment forecasts for 1999 through 2004
- Results of GOPB Olympic impact study included

### Non-Ag Employment Growth Rates in Utah: 1980-2004



### Major Industries in Utah: 1980-2004



### Specific Industry Assumptions

- Firm and industry specific assumptions have been produced by analysts at:
  - Department of Workforce Services
  - Associations of Government
  - Metropolitan Planning Organizations
  - Department of Natural Resources
  - Governor's Office of Planning and Budget

### Specific Industry Assumptions

- Coal mining, oil and gas extraction, and petroleum and coal manufacturing produced by analysts in Department of Natural Resources
- Construction modeled separately and converges to historical mean share of employment in each region
- Some industries not treated as special cases. Employment in these generated by model by maintaining relative differences with national projection series

### Industries with Specific Assumptions

<u>Industry</u> <u>Geography</u>

Agriculture All Regions

Coal Mining (DNR) Central and Southeast Regions

Oil & Natural Gas Mining (DNR)

Uintah Basin and Southeast Regions

Metal Mining Wasatch Front Region

General Construction All Regions

Heavy Construction All Regions

Special Trade Construction All Regions

Petroleum Refining (DNR) Wasatch Front Region

Primary Metals Wasatch Front and Mountainland Regions

Electric, Gas & Sanitary Central, Southwest, Uintah Basin, and Southeast Regions

Private Education Mountainland Region

Federal Defense All Regions

## Firms and Organizations with Specific Assumptions

Theratech Utah Relay Ebay Inc.

American Stores Pagenet Yankee Candle

Perot Systems Bureau of the Census Watkins Motor Lines

AMX International Zions Bank / First Security Merger Summerplace

Select Comfort Retail Group Specialized Bicycle Components Cornell Corrections

Nordstroms Packard Bell Intel International

Iomega Utility Trailor Manufacturing Moore Business Forms

International Home Foods Dana Corporation Mickohn

Alliant Techsystems Reese Brothers Tuachan Charter School

Gull Laboratories Sterling Truck Purgatory Correctional Facility

Gateway 2000 Micropoint, Inc. Troubled Teen Treatment Centers

Nimbus CD International Rivers West Apparal Metalcraft

Hill AFB Garden Burger, Inc. Avance Technologies

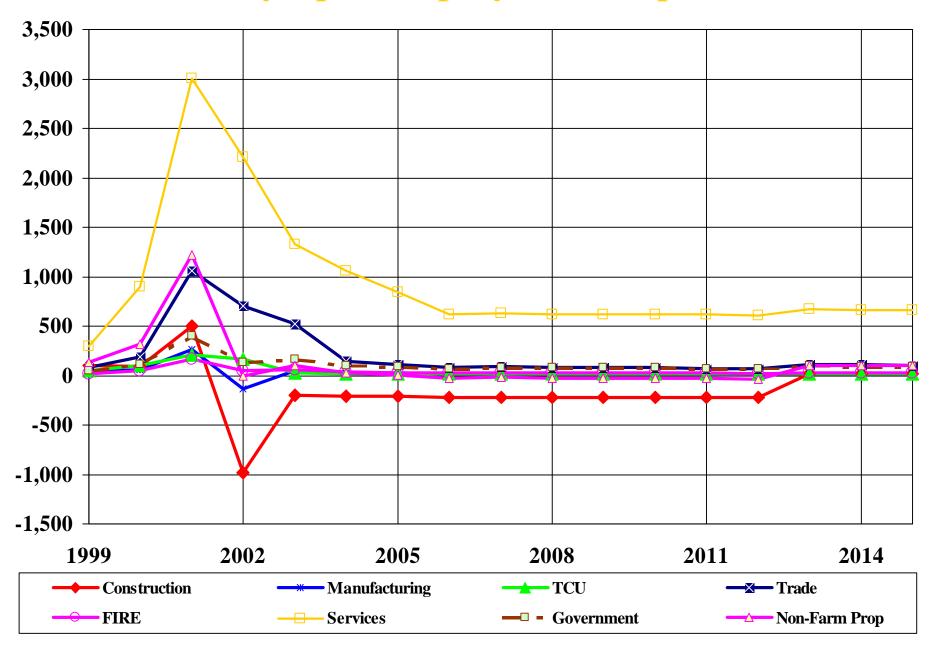
Fonix Winair Auto Meter

Marketstar Penco Products Wasatch Technologies

Quanex Marketing Ally Snow College South

Tartan Textiles Piper Impact

### Olympic Employment Impacts



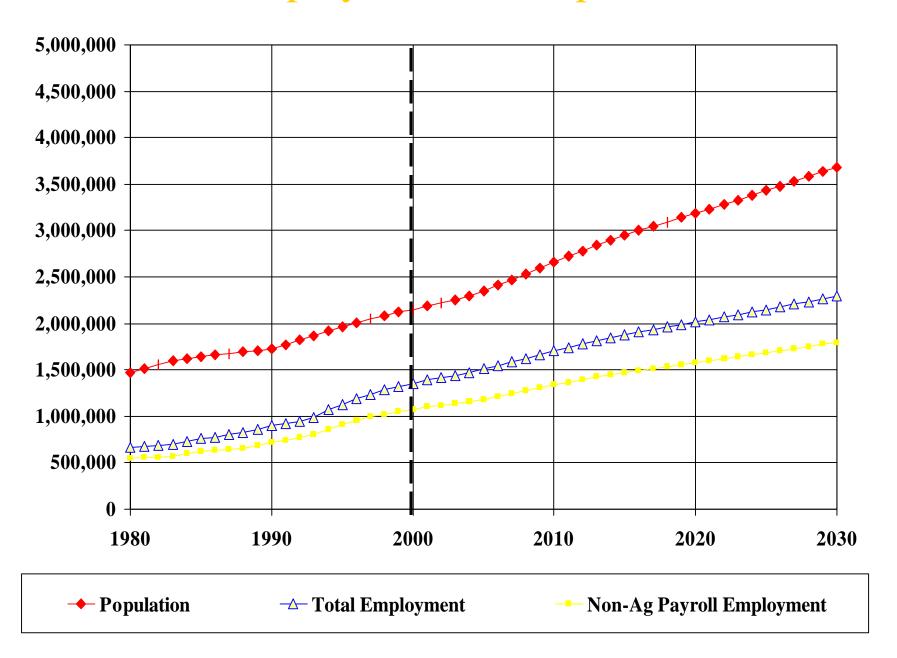
## Utah Process Economic & Demographic Model (UPED)

Economic Base Model

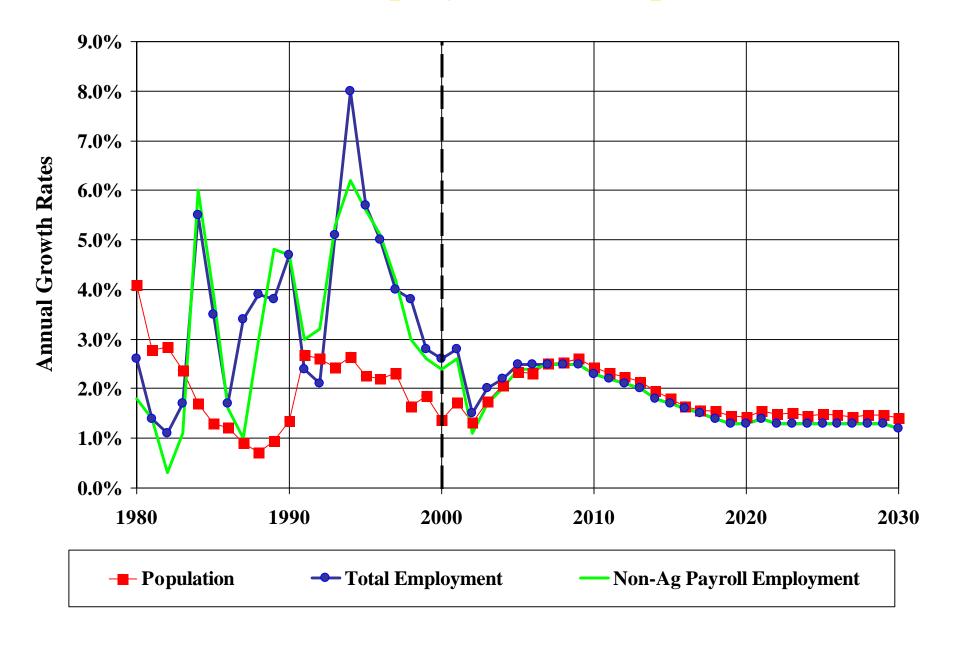
Cohort Component Model

Integrated Economic and Demographic Projections

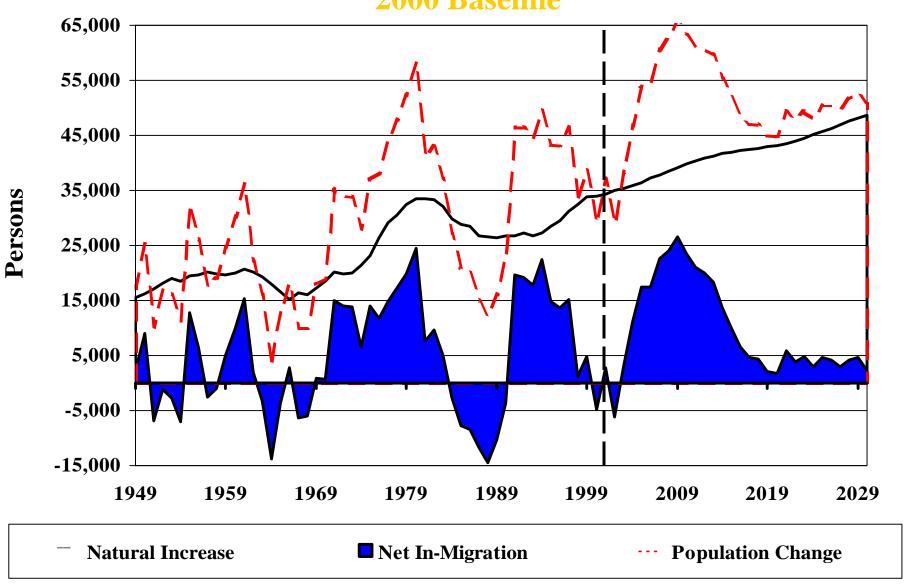
### Total State Employment and Population 1980-2030



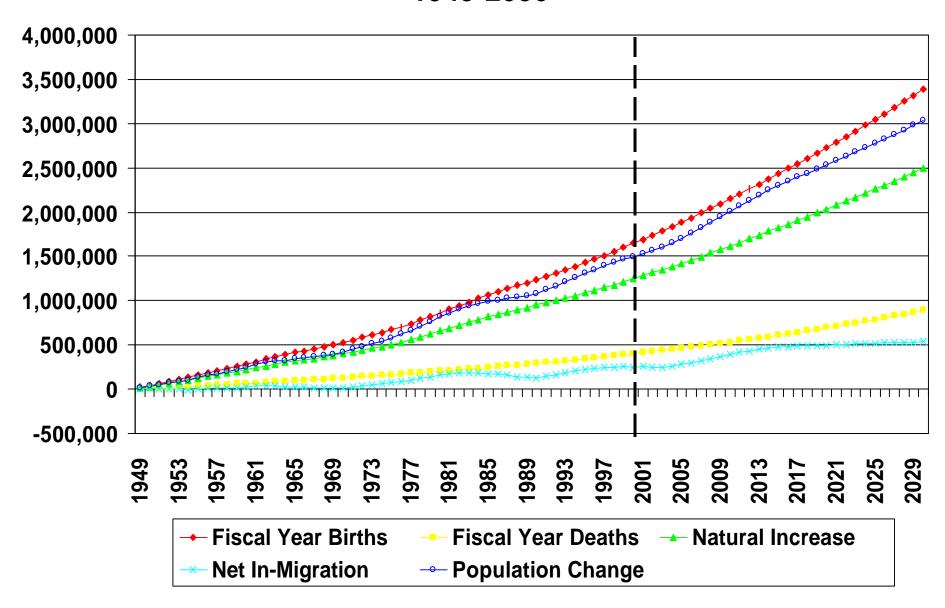
### Total Employment & Population



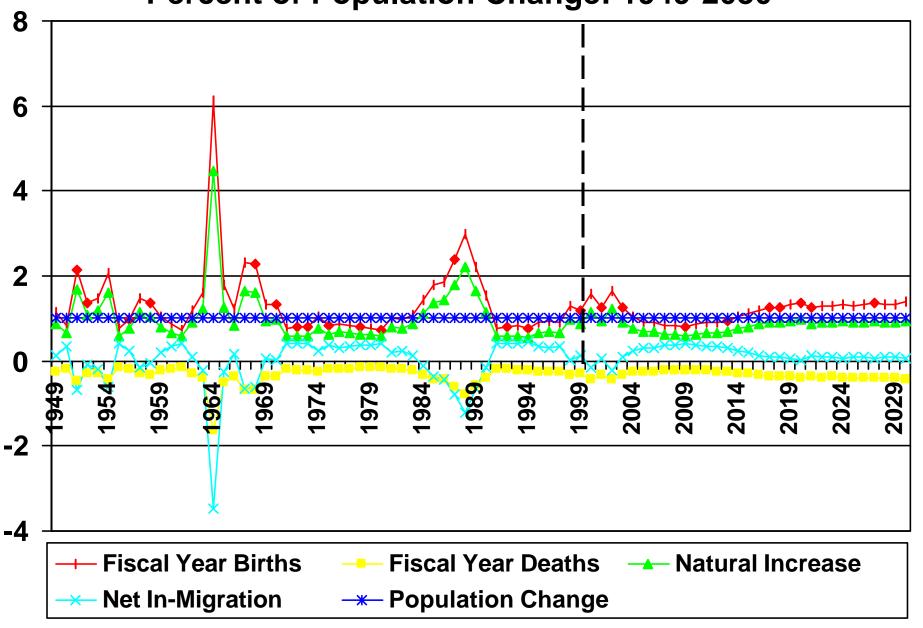
## State of Utah Components of Population Change 2000 Baseline



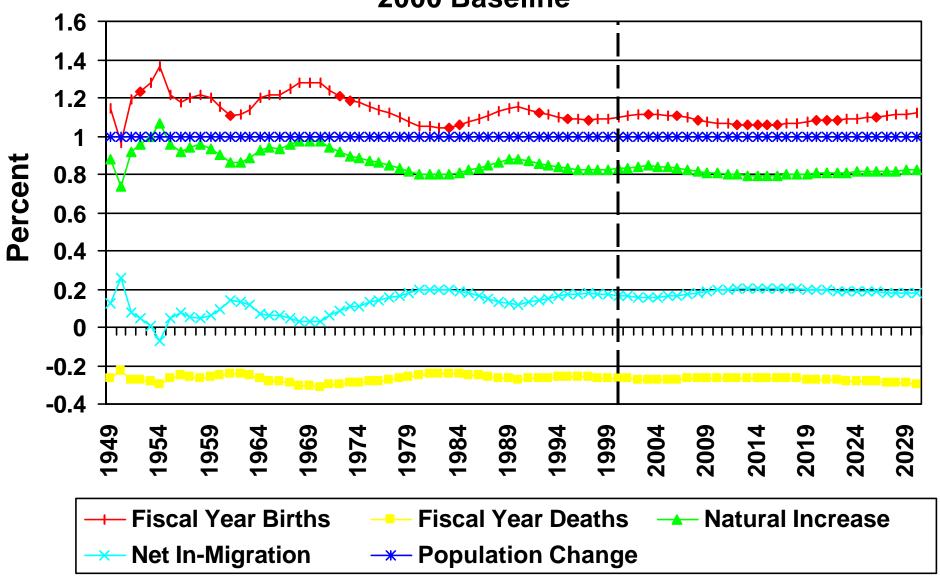
State of Utah
Cumulative Components of Population Change
1949-2030



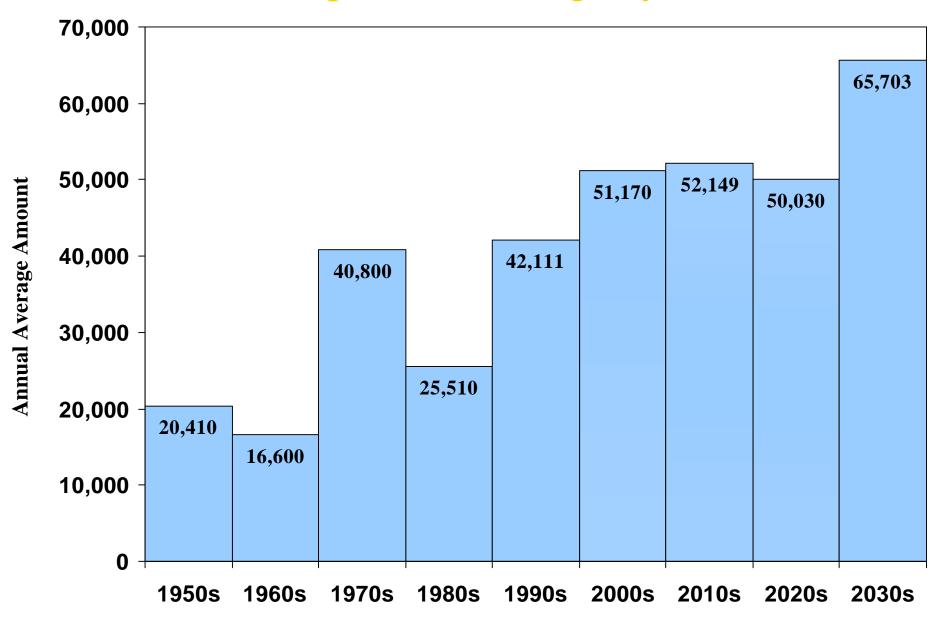
State of Utah Percent of Population Change: 1949-2030



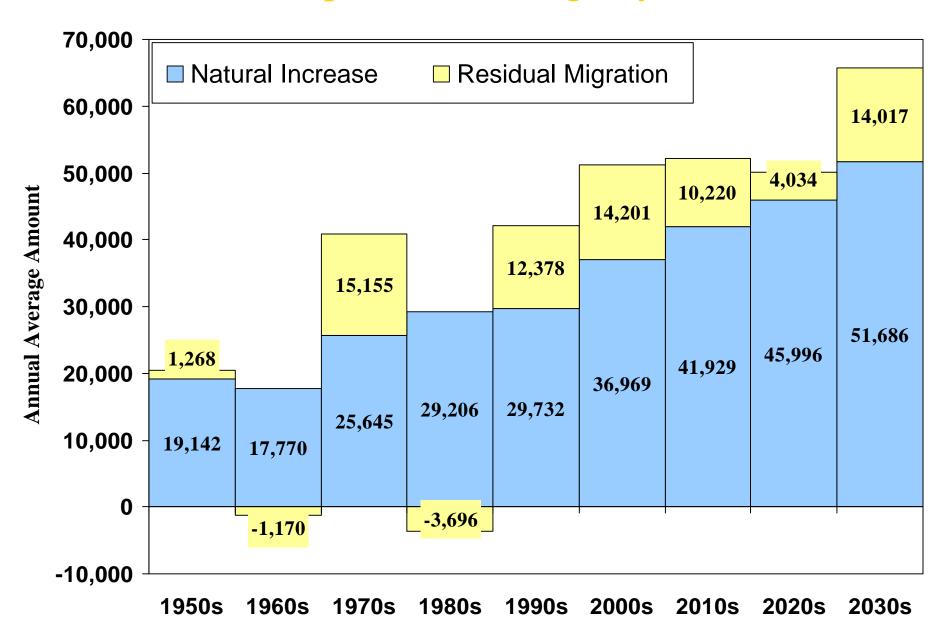
State of Utah
Cumulative Percent of Population Change: 1949-2030
2000 Baseline



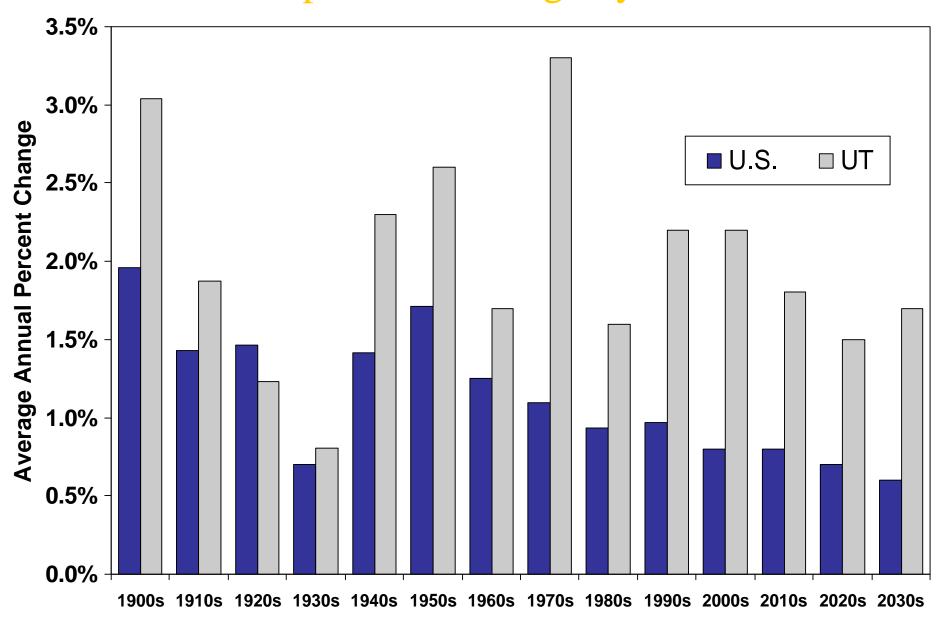
### Utah Population Change by Decade



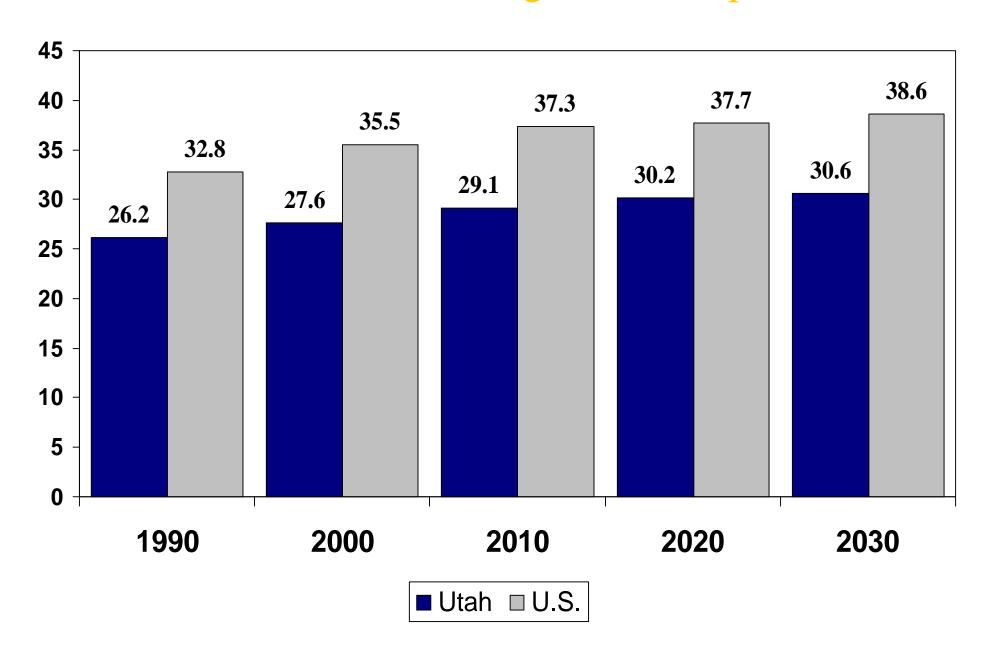
### Utah Population Change by Decade



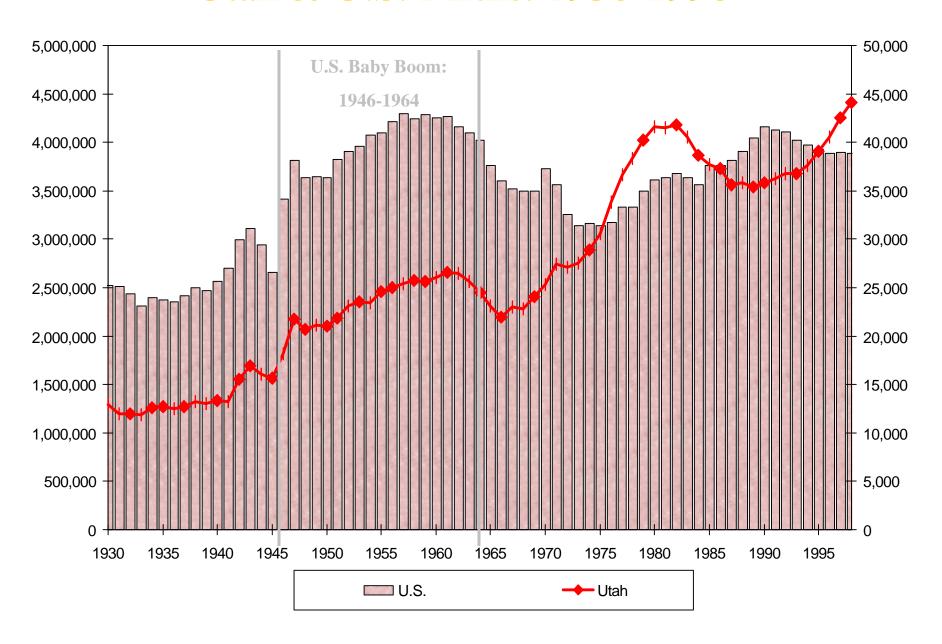
### Utah Population Change by Decade:

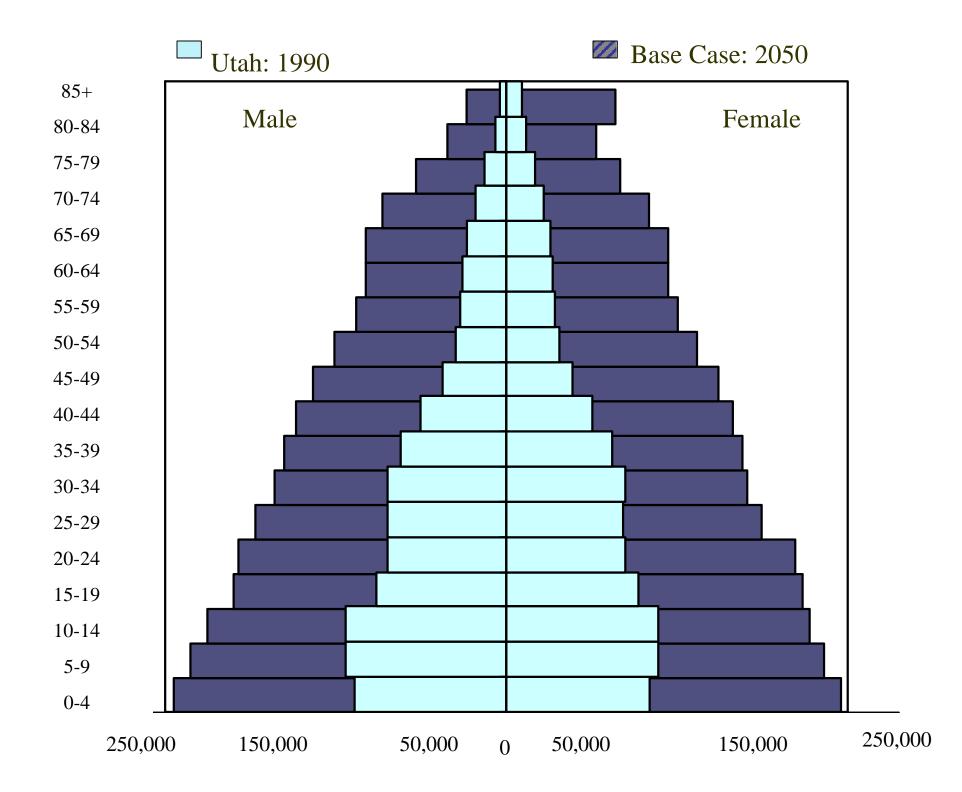


### Utah & U.S. Median Age of the Population

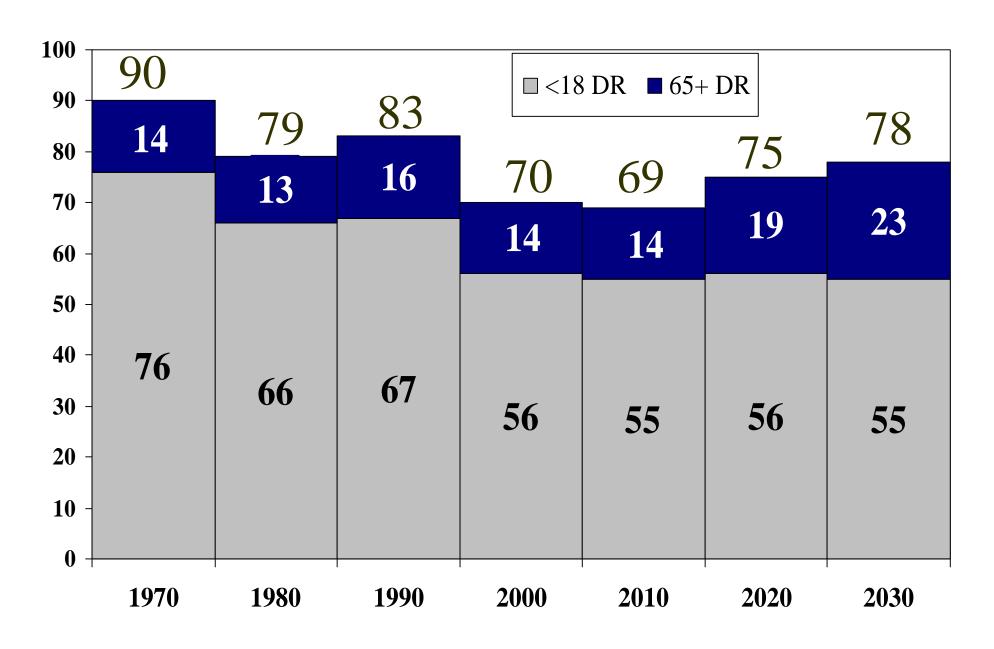


#### Utah & U.S. Births: 1930-1998

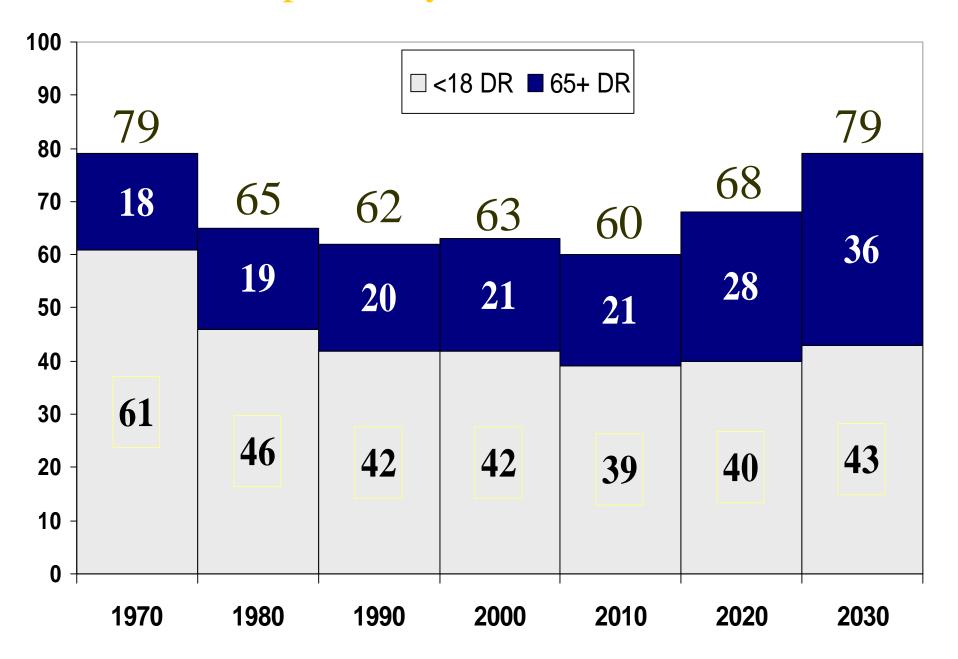




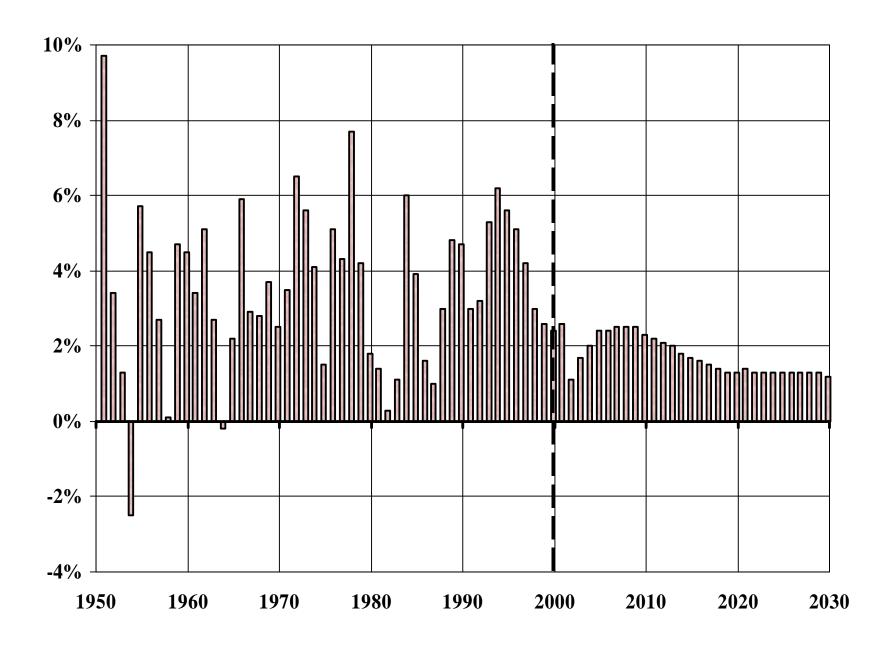
### Utah Dependency Ratios: 1970 - 2030



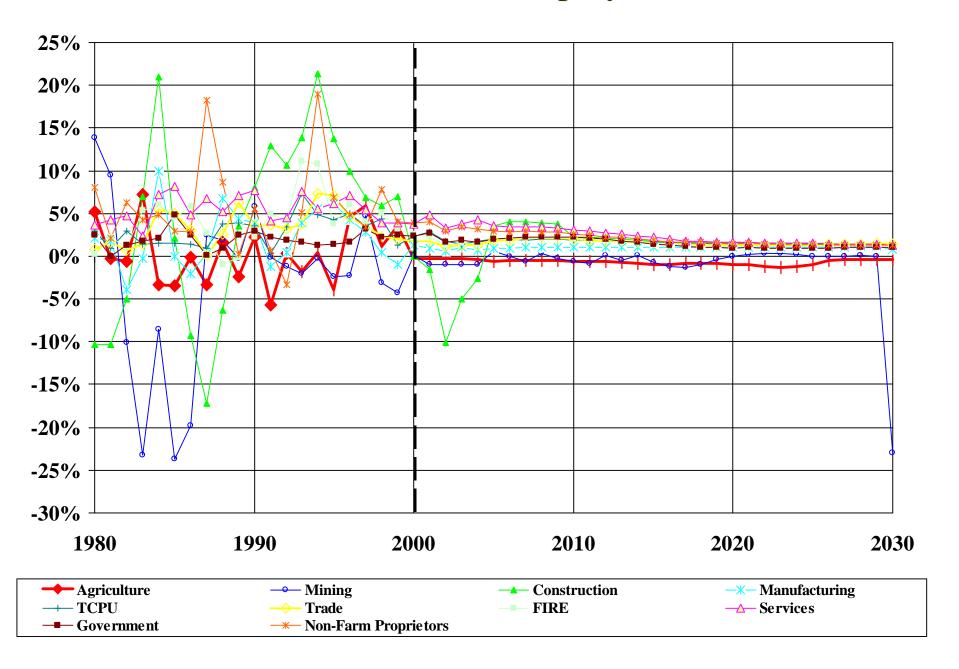
U.S. Dependency Ratios: 1970 - 2030



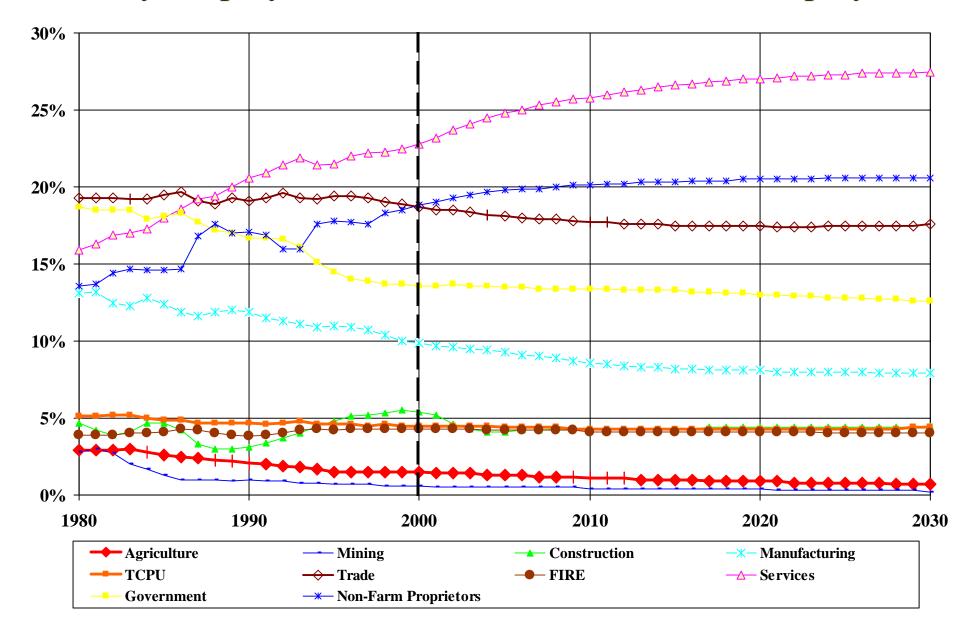
### Annual Growth Rates: Non-Ag Payroll Employment



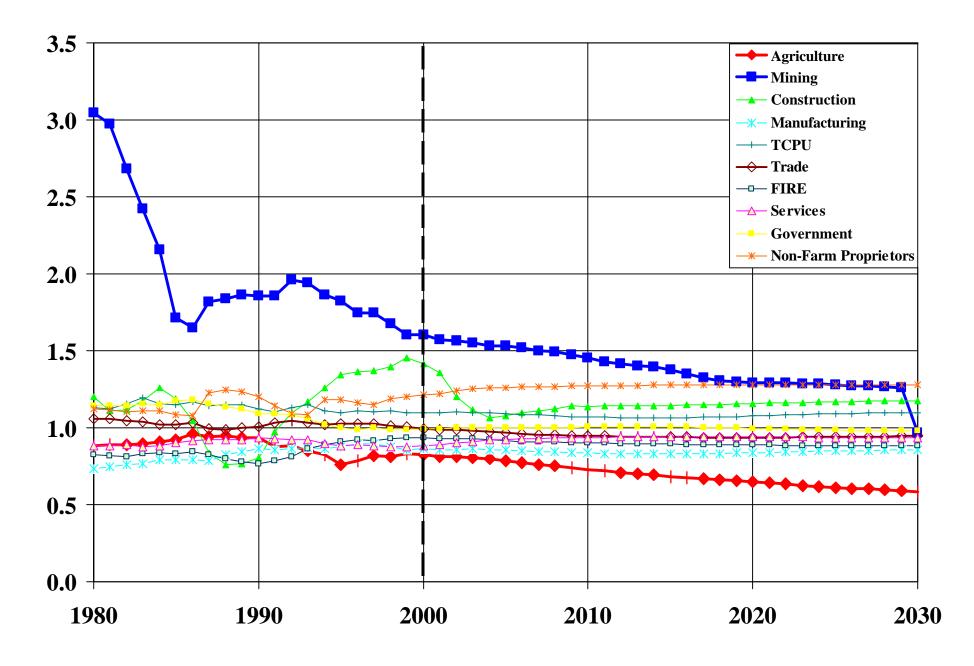
### Annual Growth Rates: State Employment 1980 - 2030



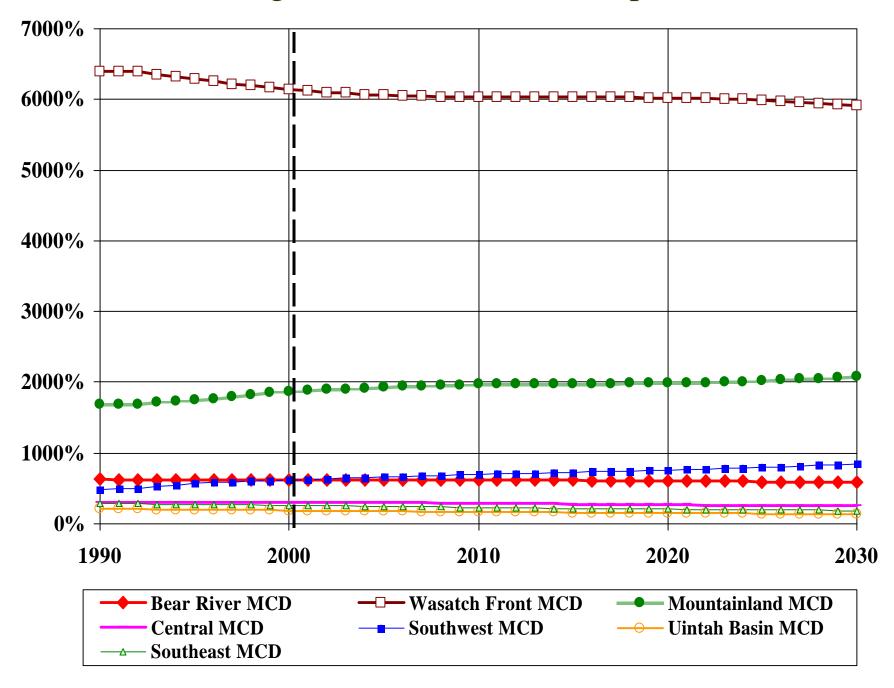
### Industry Employment as a Share of Total State Employment



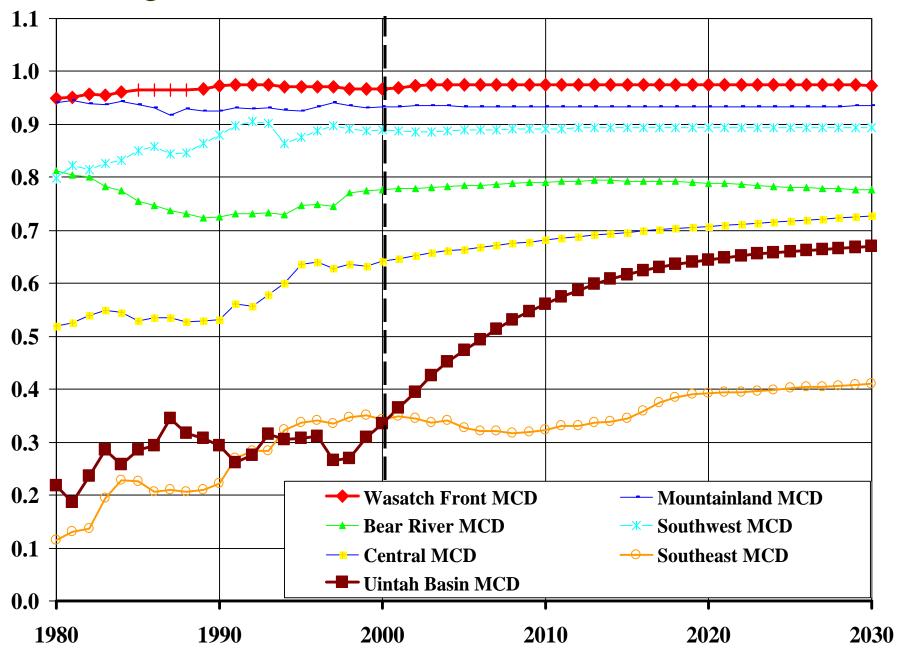
### Location Quotients: State Employment 1980 - 2030



### Region's Share of State Population



### Region's Hachman Index Relative to the Nation



### Region's Population Growth Rate From Base (1995) Year

